



University of Connecticut
Department of Speech, Language, and Hearing Sciences

College of Liberal Arts
and Sciences

Co-Chairs Senator Gerratana, Representative Johnson, ranking members Senator Welch, Representative Srinivasan and members of the public health committee, thank you for raising these bills and bringing them to public hearing for the opportunity to submit written testimony in support of HB 5988.

Survey data from the Center for Disease Control suggest that 12.5% of school aged children (6-19) are demonstrating hearing losses consistent with noise exposure (Niskar et al., 2001). Data has shown that a significant portion of children diagnosed with noise-induced hearing loss (identified in the Niskar 2001 study) would be missed if they were tested with our current hearing screening guidelines (Meinke 2007). The U.S. Department of Health and Human Services Healthy People 2020 initiative includes objective ENT-VSL-7 which aims to "reduce the proportion of adolescents who have elevated hearing thresholds, or audiometric notches, in high frequencies (3, 4, or 6 kHz) in both ears, signifying noise-induced hearing loss." ENT VSL-4.3 aims to "increase the proportion of adolescents aged 12-19 years who have had a hearing examination in the past five years." ENT VSL-6.2 aims to "Increase the proportion of adolescents aged 12 to 19 years who have ever used hearing protection devices (earplugs, earmuffs) when exposed to loud sounds or noise." Our current hearing screening guidelines did not consider noise-induced hearing loss when they were developed and are inadequate for identifying this type of hearing loss as they do not include 3 and 6 kHz. For this reason, I support modifying hearing screening guidelines at the middle school level to better identify this type of hearing loss by at the very least, adding 3 and 6 kHz to screenings and eliminating the allowance to increase the screening level to 25 dB HL if they fail at 20 dB HL. This would likely increase screening time by one minute per student. To increase identification of noise induced hearing loss, a diagnostic hearing evaluation should be completed by an Audiologist, as they are the professionals with the appropriate equipment and scope of practice for diagnosing hearing loss and who can educate children on hearing loss prevention make proper medical referral as necessary.

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References:

Niskar AS, Kieszak SM, Holmes AE, Esteban E, Rubin C, Brody DJ. Estimated prevalence of noise-induced hearing threshold shifts among children 6 to 19 years of age: the Third National Health and Nutrition Examination Survey, 1988-1994, United States, Pediatrics. 2001 Jul;108(1):40-3.

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Meinke & Dice, Comparison of Audiometric Screening Criteria for the Identification of Noise-Induced Hearing Loss in Adolescents, American Journal of Audiology. December 2007; Vol. 16, S190-S202.

American Academy of Audiology Fact Sheet

<http://www.audiology.org/resources/consumer/Documents/FSHearingLossChildren08.pdf>

Robert V. Harrison PhD DS, Noise induced hearing loss in children; a "less than silent" environmental danger.http://www.hearingfoundation.ca/User/Docs/Harrison_Noise__induced_hearing_loss_paper_formatted_1.pdf

<http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=20>